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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,401	01/26/2004	Kym B. Arcuri	17615-2	3360

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EXAMINER	
MCDONOUGH, JAMES E	
ART UNIT	**PAPER NUMBER**
1793	

MAIL DATE	DELIVERY MODE
12/07/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/766,401	ARCURI ET AL.	
	Examiner	Art Unit	
	James E. McDonough	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 October 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) *13-19* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *2/7/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Applicant's election without traverse of Group I, claims 1-12 in the reply filed on 10/22/2007 is acknowledged. Since the reply did not specifically point out and identify any errors in the restriction it is considered an election without traverse and is therefore made final.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-5 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (USP 6,080,907) in view of Spencer et al. (USP 5,977,354) in view of Melvin (USP 5,284,995) in further view of Yokoyama et al. (USP 6,284,661).

Regarding claim 1

Regarding steps (a) and (b)

Miller teaches the use of high pressure jets of water or ammonia to open a munitions casing to expose the components and that abrasives can be present in the high pressure stream(abstract).

Regarding step (c)

Although, Miller does not teach cooling below 80 C, Miller also does not teach that the stream has been heated above 80 C, and one skilled in the art would expect the stream to be less than 80 C given STP, absent any evidence to the contrary.

Regarding steps (d) and (e)

Although, Miller does not explicitly teach the use of a settling tank, Miller does teach that when water is used an emulsion is formed, and the skilled artisan would appreciate that an emulsion left to stand (settle) will revert to a biphasic solution, and the skilled artisan would appreciate that components less dense (i.e. binders) than the cutting fluid will float on top of the cutting fluid, and that components that are more dense (i.e. explosive ingredients) than the cutting fluid will sink the bottom. At this point the skilled artisan would appreciate that the components floating on top of the cutting fluid can be easily decanted from the mixture and further processed to remove residual cutting fluid from the solid material (i.e. binders). Furthermore, Yokoyama teaches that debris from cutting needs to be removed from the cutting fluid before the cutting fluid can be recycled and used again to prevent deterioration of the work environment and damage to cutting instruments (column 1, lines 33-40).00.

Regarding step (f)

Miller teaches the recycling of the cutting fluid (column 15, lines 16-37), and even though this specific teaching is directed towards ammonia the skilled artisan would appreciate that this also could be done when the cutting fluid is water, since these cutting fluids will present a environmental disposal problem if not recycled.

Regarding steps (g) and (h)

At this point the skilled artisan would appreciate that the solids at the bottom of the settling tank (composed of energetic material and abrasive particles) can be removed as a slurry, and Miller teaches removing the abrasive particles from the mix through either filtration or magnetic means (column 19, lines 8-14).

Regarding steps (i)

Although, Miller does not explicitly disclose the stripping of water with a solvent (methanol), Miller is directed towards recovery of the energetic materials, however, because Spencer teaches that TNT can be removed from secondary explosives by washing the TNT/nitramine mixture with a solvent for TNT that is a non-solvent for the nitramine, and although, Spencer does not teach the use of methanol, Spencer teaches that non-solvents for the nitramine can be easily determined by those skilled in the art (column 2, lines 20-27), which would serve to displace the remaining water, making a slurry of nitramines in TNT solution, and Melvin teaches the "Final separation of and recovery of the target material can be accomplished using a wide variety of chemical wash, extraction, and crystallization methods." and that "Methanol for example is an excellent solvent....The HMX and RDX nitramines are insoluble in methanol." (column 7, lines 24-29 and 50-55), further demonstrating the obviousness of substituting

methanol for other solvents and modifying certain steps absent any showing of criticality.

Regarding steps (j)

The continued washing steps of Spencer provide for a separation of TNT from the nitramine.

Regarding steps (k) and (l)

Although, both Miller and Spencer fail to teach the solution of TNT is flash vaporized or that the solvent is recovered, this would be obvious because one skilled in the art would appreciate that TNT has value and would isolate this component from the solvent to be reused or sold, and stripping the solvent would be the easiest way to separate the TNT from the solvent. With respect to recycling the solvent as stated above this is obvious because the disposal of the solvent would present environmental problems and recycling the solvents saves money additionally by requiring the purchase of less solvent for the process.

Regarding steps (m) and (n)

Although, the references are silent as to stripping remaining solvent from the TNT using steam or drying the TNT to a predetermined level, These limitations are considered obvious as the solvent needs to be removed from the TNT product before reuse of that product and contacting with steam is one method to remove residual solvent, and it is well known that TNT in the wet state is less hazardous, and one skilled in the art could determine the level of dryness desired to add a layer of safety to the recovered TNT product.

Regarding claim 2

The references teach filtration for the removal of the TNT solution from the nitramine (column 2, lines 13-28).

Regarding claims 3-5

Miller teaches using garnet and magnetic separation of the abrasive particles (column 18, line 30 to column 19, line 14).

Regarding claim 7

Although, the references are silent with respect to condensing and recycling the methanol solvent, this is obvious for the reasons stated above because disposing of process solvents adds cost in buying more solvents and disposing of solvents defeats the purpose of the inventions of the references and the instant application as they are directed towards recycling hazardous materials for environmental purposes and discharge of process solvents would defeat this purpose, plus there is the added cost with disposal.

Regarding claim 8

Although, the reference are silent in this respect, this is considered obvious because in a continuous process settling process where some components are skimmed off the top and other are settling, if the feed rate is faster than the settling rate the more dense components will not settle and will be removed with the less dense materials.

Regarding claim 9

The separation process as taught by Spencer teaches a process where TNT is separated from secondary explosives, where the sealer material is removed from the feed matrix prior to further separation (see entire document).

Claims 6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (USP 6,080,907) in view of Spencer et al. (USP 5,977,354) in further view of Melvin (USP 5,284,995) as applied to claims 1-5 and 7-9 above, and further in view of Somoza et al. (USP 5,279,492).

Because, Somoza teaches a process for the desensitization of explosives and states that Class ! RDZ is prepared as a wet slurry comprising RDX, isopropyl alcohol, and water for shipping and storing, for safety reasons (column 1, lines 55-60), it would have been prima facie obvious to someone of ordinary skill in the art at the time of invention to modify the primary references, by making a slurry of RDX, isopropyl alcohol, and water, after separation from the other components before shipping or storing the material for safety reasons, as suggested by Somoza.

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (USP 6,080,907) in view of Spencer et al. (USP 5,977,354) in further view of Melvin (USP 5,284,995) as applied to claims 1-5 and 7-9 above, and further in view of Wulfman (USP 5,445,690).

The primary references are silent with respect to the nitramine containing a desensitizing agent such as a natural or synthetic wax, however, because Wulfman

teaches that many times for safety reasons highly brisant materials (i.e. RDX, HMX, PETN, etc.) are " phlegmatized" (i.e. coated with a wax), one skilled in the art would expect that sometimes the energetic materials removed from military ordinance will contain a coating of wax and Miller teaches that along with the cutting fluid can be used "hydrocarbons such as pentane, decane and so forth." (column 24, lines 14-15), the skilled artisan would appreciate that hexane could be substituted for pentane or decane with predictable results and having the effect of removing through dissolution any wax coating on the secondary explosives present, and since it is desired to achieve pure products after the separation processes have been performed.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-12 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-23 of U.S. Patent No. 6,777,586 in view of Lamoureux (USP 6,156,194). The patent 6,777,586 teaches the limitations of the claims except the use of abrasive particles of garnet that are magnetic so the can be magnetically separated from the other components, however, because Lamoureux teaches that the use of abrasives with water jets is well known, and that abrasives such as garnet can be used, and that the skilled artisan can select abrasives based on there magnetic properties relative to other components and that the differences in magnetic properties can be exploited for separation of the components (column 2, lines 20-44), it would have been prima facie obvious to someone of ordinary skill in the art at the time of invention, to modify the primary reference by using abrasive particles of garnet that are magnetic to aid in both the comminution of the explosive mix but also the separation of the abrasive from the other components, as suggested by Lamoureux.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James E. McDonough whose telephone number is (571)272-6398. The examiner can normally be reached on 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571)272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JEM 12/2/2007

J.A. LORENGO
SUPERVISORY PATENT EXAMINER